



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3179-041
Job Sheet 180497



Part No: D3179-041

Job Qty: 4 ea

Part Name: Litter Tie Down (Non-Locking)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/7/18

Job Tracking No:

Due Date: 7/20/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV E IPP A1 03.01.09 Added Acid etch end alodine RF IPP Rev:B Added Powder Coat 07-07-04 JLM
IPP REV:C AS PER REV D JLM 13-05-24 VERIFIED BY:DD IPP Rev:C 08-12-10 add part list DD verified
by:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea	7/20/18	7/20/18	0.00	0.00	Start Up Machining-1	am L	DSP 18/07/20
100	Bandsaw	4 pcs	7/20/18	7/20/18	0.00	0.33	Bandsaw1	1c	DSP
110	CNC Vertical Machining	4 pcs	7/20/18	7/20/18	0.37	7.27	HAAS1-3	1c	DSP
120	QC	4 pcs	7/20/18	7/20/18	0.00	0.00	QC2 Machining-1	1c	DSP
130	QC	4 pcs	7/20/18	7/20/18	0.00	0.00	QC8 Machining-1	1c	DSP
140	HandFinish	4 pcs	7/20/18	7/20/18	0.00	0.32	HandFinish1		SA 18-07-23
150	QC	4 pcs	7/20/18	7/20/18	0.00	0.00	QC7-2		SA 18-7-23
160	Powdercoat	4 pcs	7/20/18	7/20/18	0.00	0.24	Powdercoat1		SA 18-7-23
170	QC	4 pcs	7/20/18	7/20/18	0.00	0.00	QC3		SA 18-7-23
180	Small Fab	4 pcs	7/20/18	7/20/18	0.00	0.60	Small Fab-3		DAS
190	QC	4 pcs	7/20/18	7/20/18	0.00	0.00	QC5		38
200	Packaging	4 pcs	7/20/18	7/20/18	0.00	0.00	Packaging3-1	SA 225	AUG 10 2018
210	QC21-SA	4 Ea	7/20/18	7/20/18	0.00	0.00	QC21		21 AUG 10 2018

Part Op 100 - Cut blanks: 12.150" long

Descriptions: 110 - 1- Mill as per Folio FA297 Rev: & Dwg D3179-1 Rev:

160 - START TIME: 3:20

180 - Assemble as per Dwg D3179

18.08.01
18.01.02

Drill Holes #D.246

DVT: 320° FINISH: 350

D6201 5053647

M 188829.

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6201	T Extrusion	4.0500 ft (1.0125 ea)	90-Start up Operation	
D2372	Quick Release	8 Ea (2 ea)	180-Small Fab	5095300
D2444	Pip Pin Assembly	4 Ea (1 ea)	180-Small Fab	5093430
MS21042L3	Nut	4 Ea (1 ea)	180-Small Fab	5078767
MS27039-1-13	Screw	4 Ea (1 ea)	180-Small Fab	5071833
NAS1149D0332J	Washer	12 Ea (3 ea)	180-Small Fab	5035396

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6201	4	6	0
180-Small Fab	D2372	8	1	0
	D2444	4	7	0

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By
 DART AEROSPACE Container No: S094327 Part: D3179 - 041 Job No: 180497 Serial No/Batch: S094327 Revision: _____ Inspector: _____ Exp Date: _____ Instructions: _____ Date: 07/20/18					Lead hand / Supervisor Approval Verification
					QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER :					

MS21042L3	4	2,098	0
MS27039-1-13	4	163	0
NAS1149D0332J	12	1,539	0

Part Specifications

Specifications could not be found.

Plex 7/9/18 7:56 AM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					

DART AEROSPACE LTD		Work Order:	180499
Description: Fwd Litter Tie Down Bracket		Part Number:	D3179-1
Inspection Dwg: D3179	Rev: E	Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	+/-0.030	0.999	✓		Vern	
R0.40	+/-0.030	0.400	✓			
R0.38	+/-0.030	0.380	✓			
1.70	+/-0.030	1.700	✓		Height Gage	
Ø0.191	+0.005/-0.001	0.192	✓		Pin	
10.500	+/-0.010	10.500	✓		Height Gage	
4.250	+/-0.010	4.250	✓			
Ø0.246	+0.005/-0.001	0.246	✓		Pin	
1.50	+/-0.030	1.500	✓		Vern	
0.750	+/-0.010	0.750	✓			
1.000	+/-0.010	0.999	✓			
4.00	+/-0.030	3.999	✓			
1.00	+/-0.030	0.995	✓		Height Gage	
1.38	+/-0.030	1.377	✓			
1.875	+/-0.010	1.871	✓			
2.125	+/-0.010	2.120	✓			
2.88	+/-0.030	2.865	✓		Vern	
3.31	+/-0.030	3.300	✓			
R0.375	+/-0.010	0.375	✓			
R0.50	+/-0.030	0.500	✓			
Ø0.191	+0.005/-0.001	0.192	✓		Pin	
R0.25	+/-0.030	0.250	✓			
R0.375	+/-0.010	0.375	✓			
R0.38	+/-0.030	0.380	✓			
12.00	+/-0.030	12.000	✓		Height Gage	
9.000	+/-0.010	9.000	✓			
7.50	+/-0.030	7.500	✓			
4.50	+/-0.030	4.500	✓			
2.88	+/-0.030	2.877	✓			
2.250	+/-0.010	2.250	✓			
1.000	+/-0.010	1.000	✓			
0.50	+/-0.030	0.500	✓			

Measured by: DJP / gmm	Checked by: [Signature]	QC Inspector:
Date: 18-07-19	Date: 18/07/21	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	09.04.05	New Issue P/O D3179-041	KJ/DD	
B	12.10.04	Dimension 0.750 was 1.750	KJ	
C	13.05.27	Dimensions revised per Dwg Rev D	KJ	
D	16.06.08	Dimensions revised per Dwg Rev E	KJ	
E	17.02.16	Dimensions rearranged	KJ	[Signature]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							